ABRITES Commander for OPEL/Vauxhall

<u>User Manual</u>

Overview

ABRITES Commander for OPEL/Vauxhall is a professional software for diagnostic of OPEL/Vauxhall vehicles. It is capable to perform a diagnostic of any unit, which operates under one of the following protocols: Keyword 82, Keyword 2000 and GMLAN. It provides some unique functions, which are not supported by any other diagnostic tool.

Standard diagnostic functions:

- Read identification
- Read fault codes
- Clear fault codes
- Device scan
- Data Display / Measured values
- Security code programming
- Vehicle identification number programming
- Programming CAN configuration
- Injector Programming
- Program Immobilizer functions
- Program Immobilizer outputs

Special functions:

- Read security code
- Key Learning
- Read/Write EEPROM
- Engine Flasher
- Read Radio Code/Reset Counter
- Erase Airbag Crash Data
- Dump Tool

Advanced functions:

- Security Access
- Custom Request
- Custom Query / Read ECU memory

Running Commander

When you run ABRITES Commander for OPEL/Vauxhall it will try to detect automatically the appropriate hardware interface and will connect with it. If the connection failed a message box with the explanation of the problem will appear.
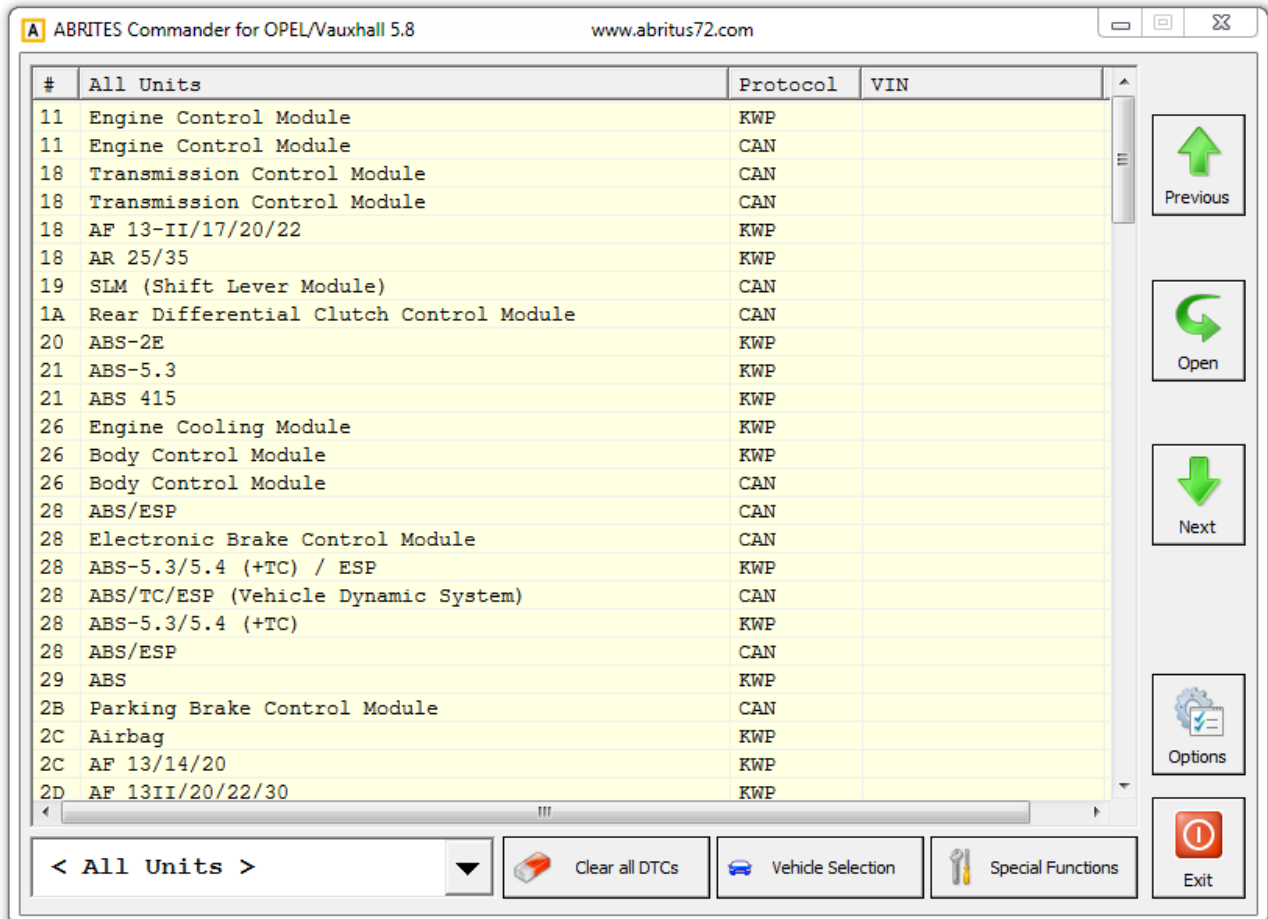
By default, when ABRITES Commander for OPEL/Vauxhall is started in the main list are displayed all available electronic control units. You can reduce the number of displayed units by specifying the vehicle context. To change the vehicle context select a desired model.
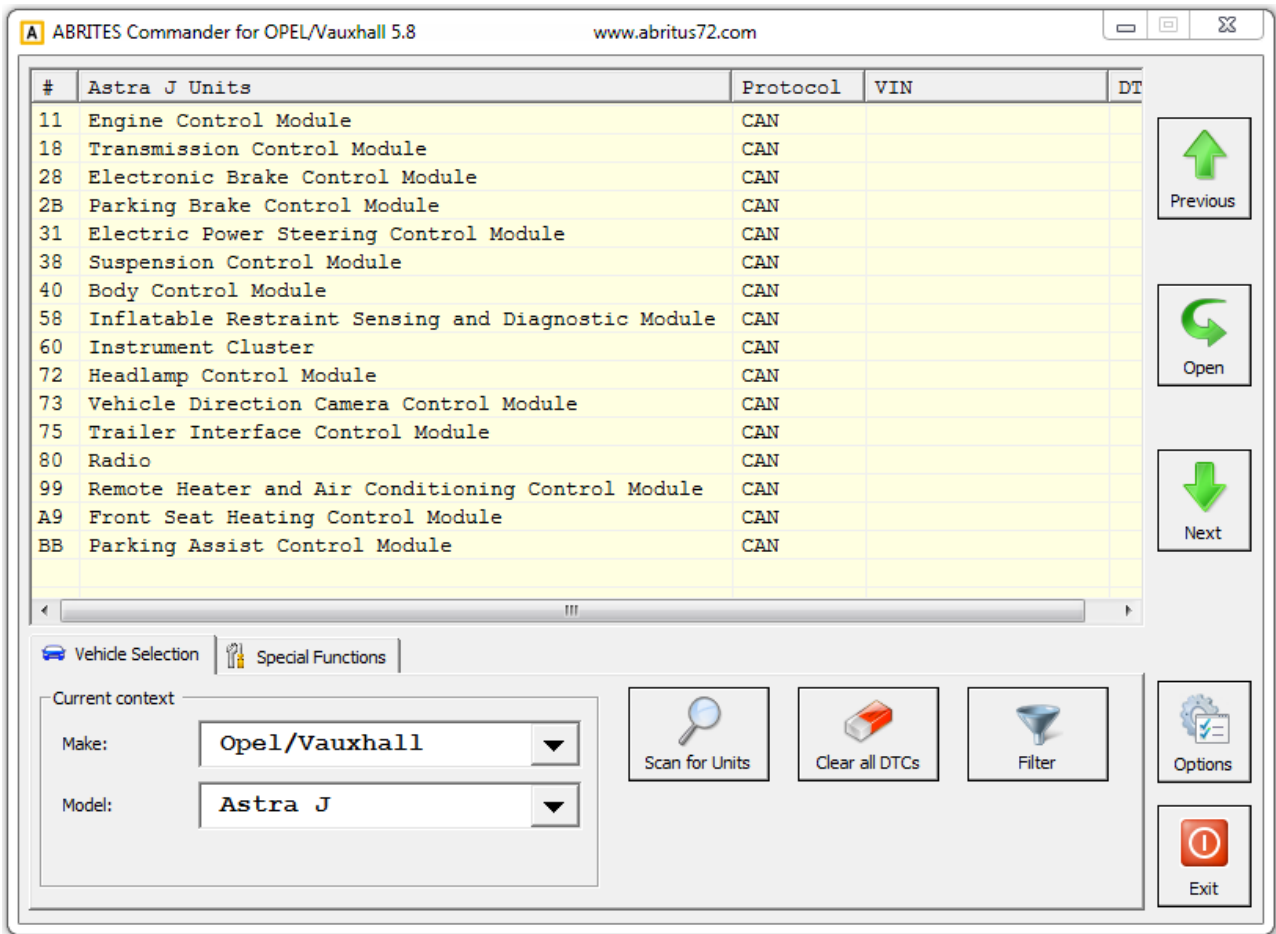
There are three groups of device units which are not part of any specific vehicle. As you can see from the next picture, these are: All Units, Scan Result and Filtered.

- The group "All Units" as you can guess from its name will display you the list of all units which are recognizable by the software.

- "Scan Result" will show you the list of the last scanned units. Refer to the Scanning section.

- The group "Filtered" contain a list of units which correspond to a specific filter pattern. A new filter pattern can be set using the filter button.
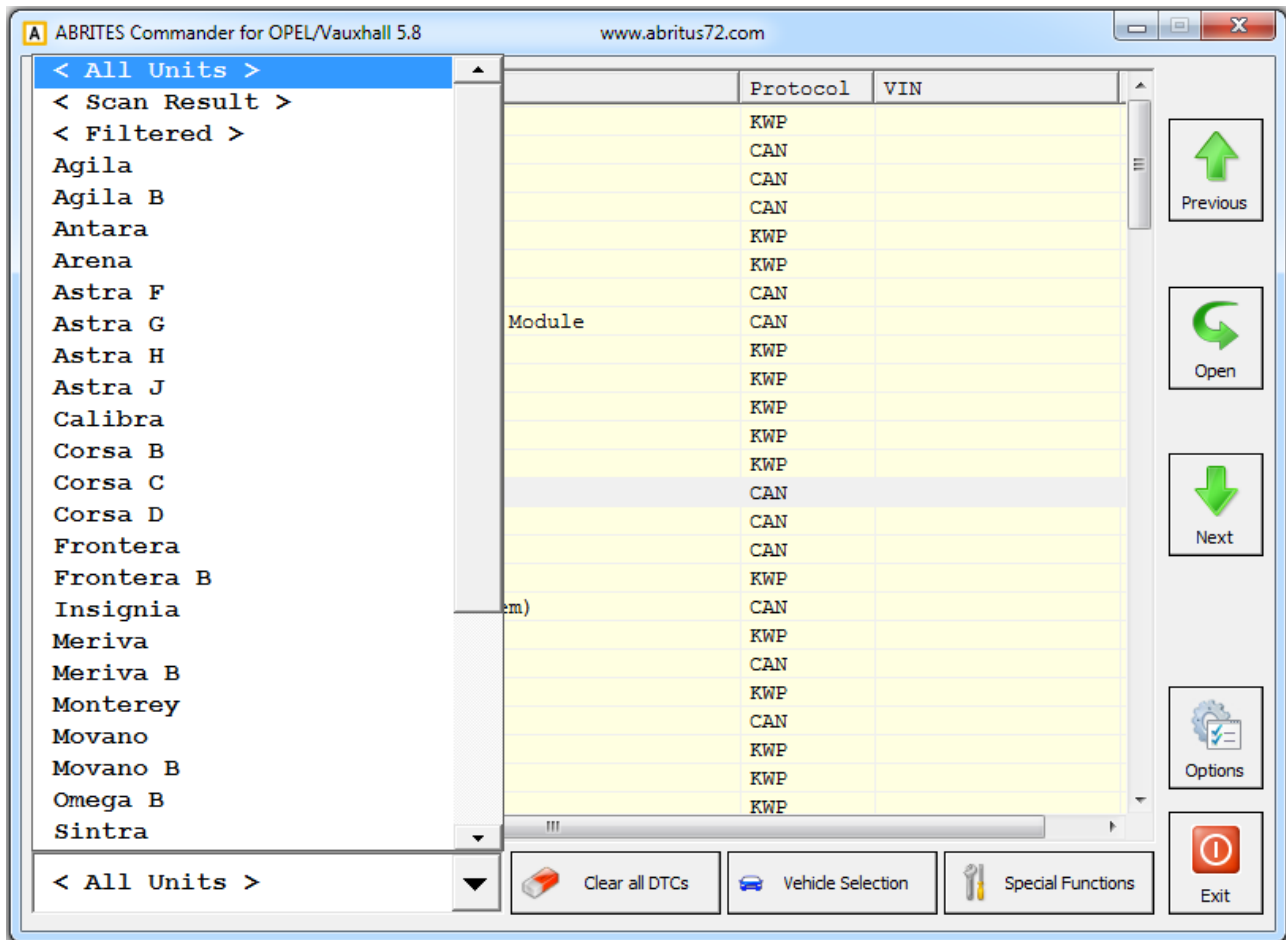
Clear all DTCs

Clear All DTC is a helpful function when you want to delete the errors from all units in a vehicle at once. The behavior of this function is to clear DTCs of all currently displayed in the main list units.

| #	Astra J Units	Protocol	VIN	DT
11	Engine Control Module	CAN		
18	Transmission Control Module	CAN		
28	Electronic Brake Control Module	CAN		
2B	Parking Brake Control Module	CAN		
31	Electric Power Steering Control Module	CAN		
38	Suspension Control Module	CAN		
40	Body Control Module	CAN		
58	Inflatable Restraint Sensing and Diagnostic Module	CAN		
60	Instrument Cluster	CAN		
72	Headlamp Control Module	CAN		
73	Vehicle Direction Camera Control Module	CAN		
75	Trailer Interface Control Module	CAN		
80	Radio	CAN		
99	Remote Heater and Air Conditioning Control Module	CAN		
A9	Front Seat Heating Control Module	CAN		
BB	Parking Assist Control Module	CAN		

Device Scanning

Device scanning function is helpful when you want to perform a quick DTC check of all available device units in a vehicle. When you click on the "Scan for Units" button on the "Vehicle Selection" screen, a progress window will appear. The behavior of the scanning can be changed by the "Device Scanning" option.
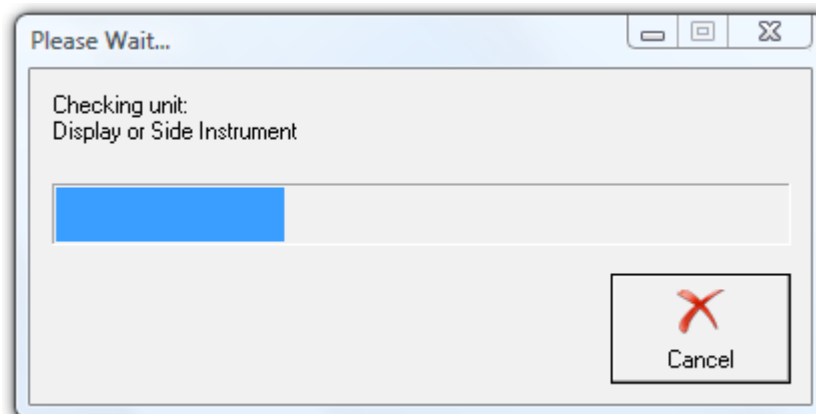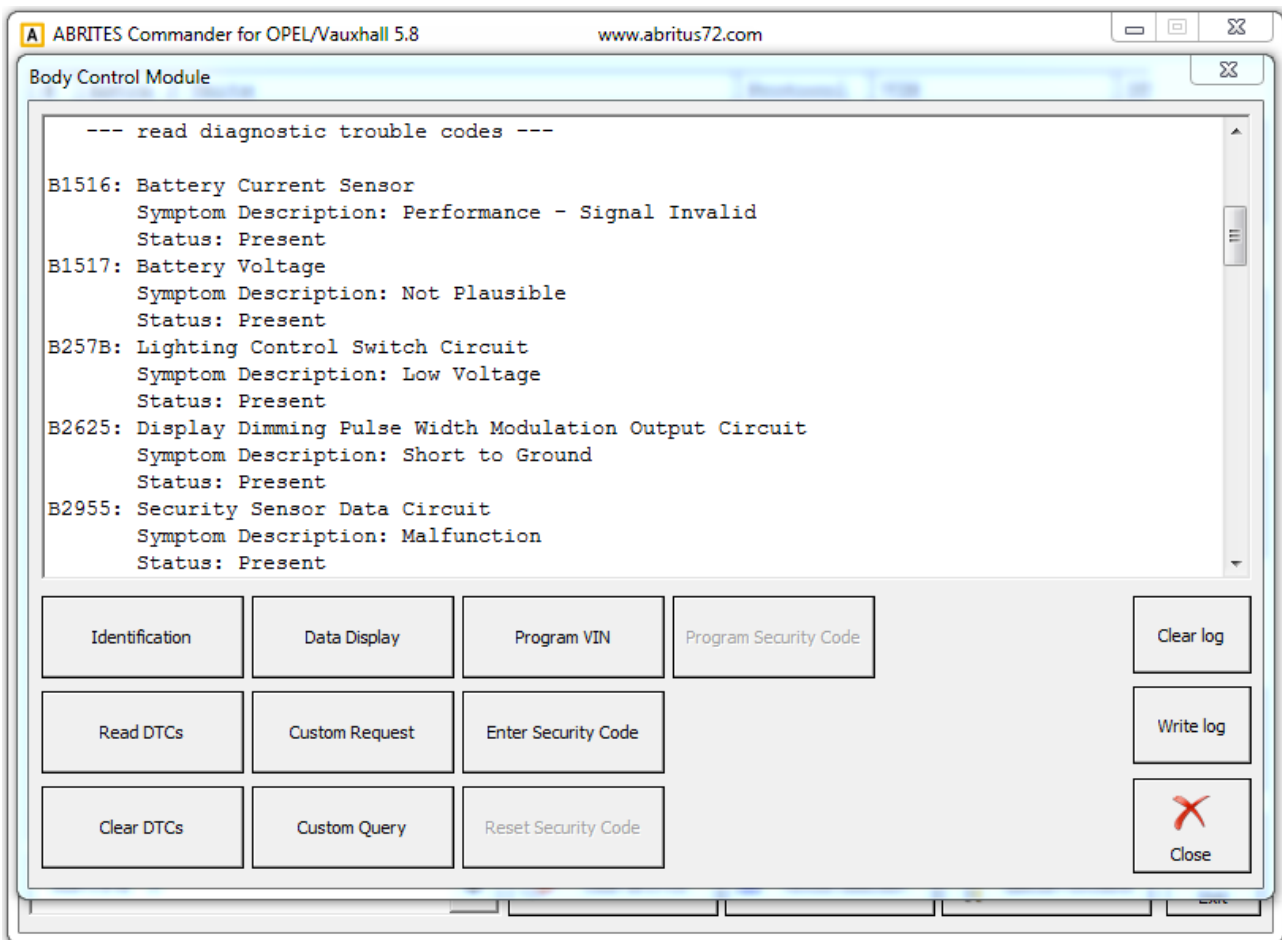
Diagnostic

Double clicking on a electronic control unit from the list in the main application window will initiate a diagnostic connection with the selected device and will open a diagnostic window. When the diagnostic session with the unit is established successfully, the identification of the device will be displayed.

Identification
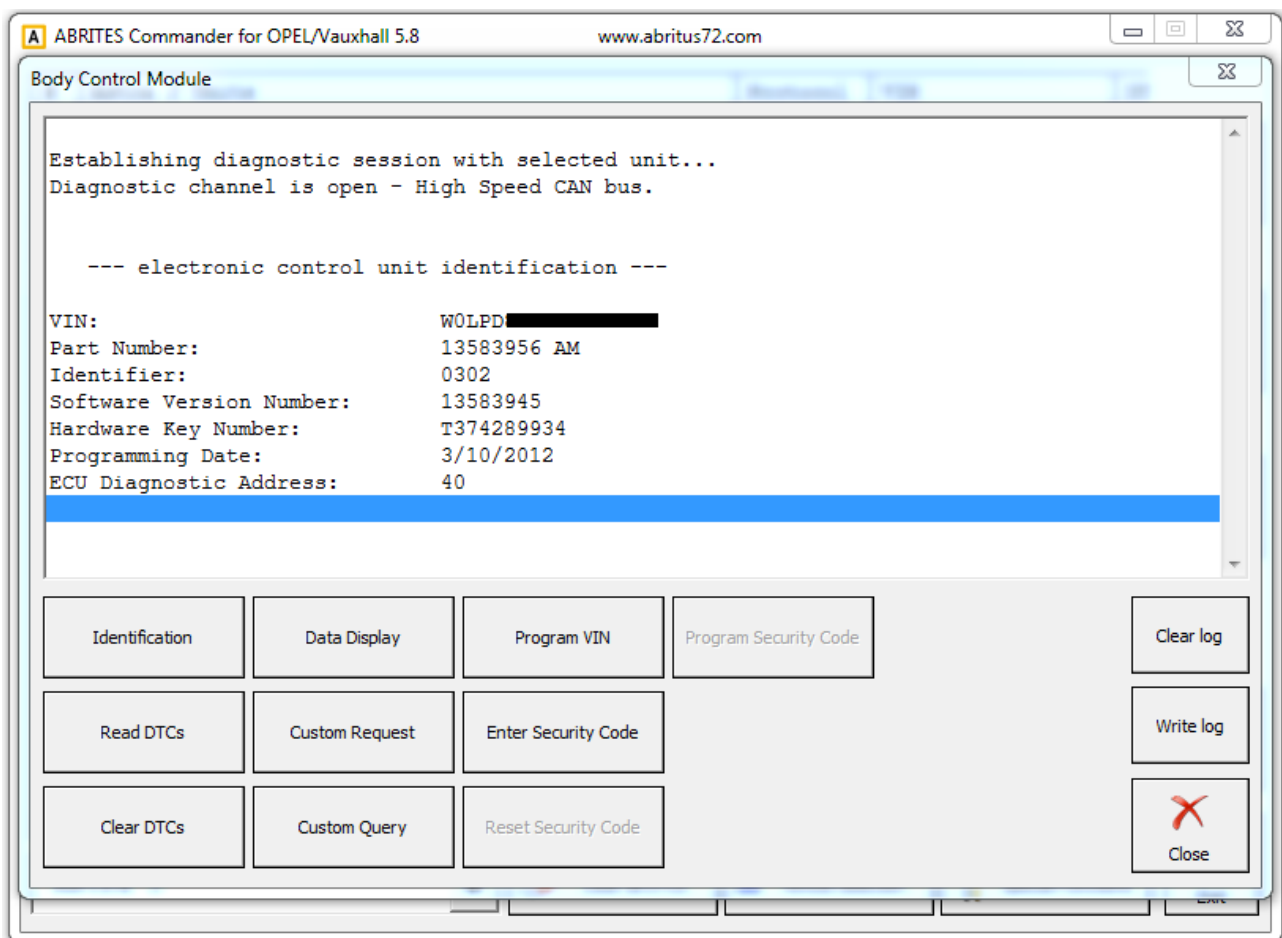
Read DTC and Clear DTC

The two main diagnostic functions are Read and Clear diagnostic trouble codes. They can be executed by clicking on the buttons Read DTCs or Clear DTCs respectively.

```
A  ABRITES Commander for OPEL/Vauxhall 5.8          www.abritus72.com          —  ▢  ⬭

Body Control Module                                                              ⬭

     --- read diagnostic trouble codes ---

  B1516: Battery Current Sensor
         Symptom Description: Performance - Signal Invalid
         Status: Present
  B1517: Battery Voltage
         Symptom Description: Not Plausible
         Status: Present
  B257B: Lighting Control Switch Circuit
         Symptom Description: Low Voltage
         Status: Present
  B2625: Display Dimming Pulse Width Modulation Output Circuit
         Symptom Description: Short to Ground
         Status: Present
  B2955: Security Sensor Data Circuit
         Symptom Description: Malfunction
         Status: Present
```

Identification	Data Display	Program VIN	Program Security Code	Clear log
Read DTCs	Custom Request	Enter Security Code		Write log
Clear DTCs	Custom Query	Reset Security Code		✖ Close

Data Display

The Data Display button will open a new window, which will show you in real-time the measured values of the unit.

Custom Request

Custom Request is an advanced diagnostic function allowing to send a diagnostic message to an electronic control unit. In the request field you have to enter the data of the diagnostic message. The software will pack the data using an appropriate transport protocol before transmitting the query to the device.
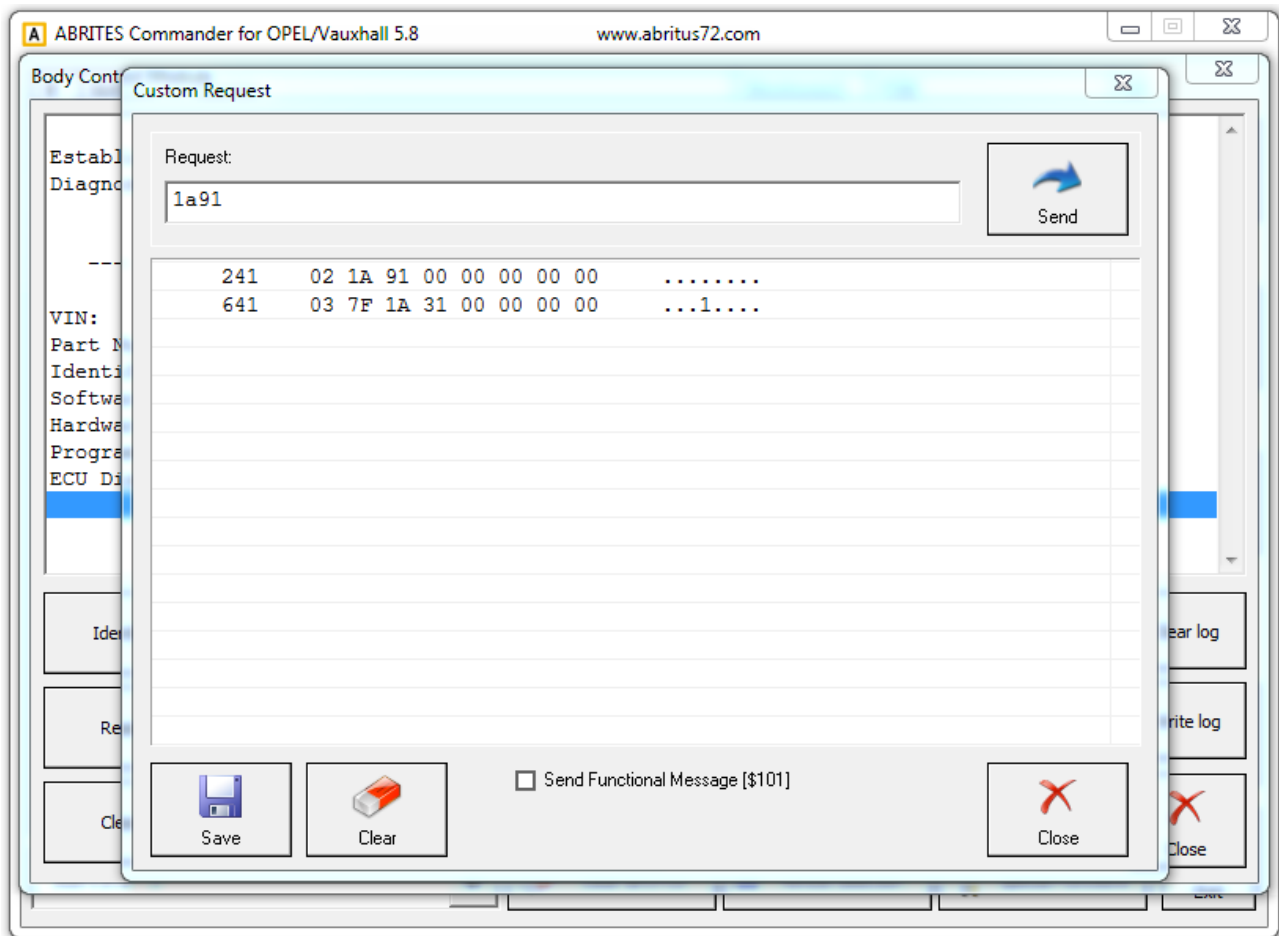
Custom Query

Custom Query is a function, which allow you to execute a previously defined diagnostic services using custom parameters.

Read Memory By Address is a part of Custom Query, which allow you to execute the diagnostic service $23 of devices operating under CAN or KWP2000. The parameters which you can set are the start address, block size and total size. The meaning of these parameters is: Read memory with size equal to 'total size' beginning from 'start adress' on blocks with 'block size'.

By default the numbers entered as parameters are interpreted as decimals. If you want to enter a hexadecimal number you should add a suffix 'h' to the number or a prefix '0x'.

NOTE: Most of the devices require a security access before allowing a memory access.

Memory scanning

In general only specific parts from the memory space are accessible. If you are performing a diagnostic of an unknown device and don't know what its memory map is, you can use the Scan Memory Space function. This function will discover all accessible memory ranges of the device.

Immobilizer

- **Enter Security Code**

For the immobilizer-related operations a security code is required and because of that, they will remain inactive until a valid security code is entered. If the immobilizer is in reset state and the security code is not programmed, it will accept any code. **Please be sure in case of installing of a new immobilizer, to enter the security code of the vehicle in which it will be installed.**
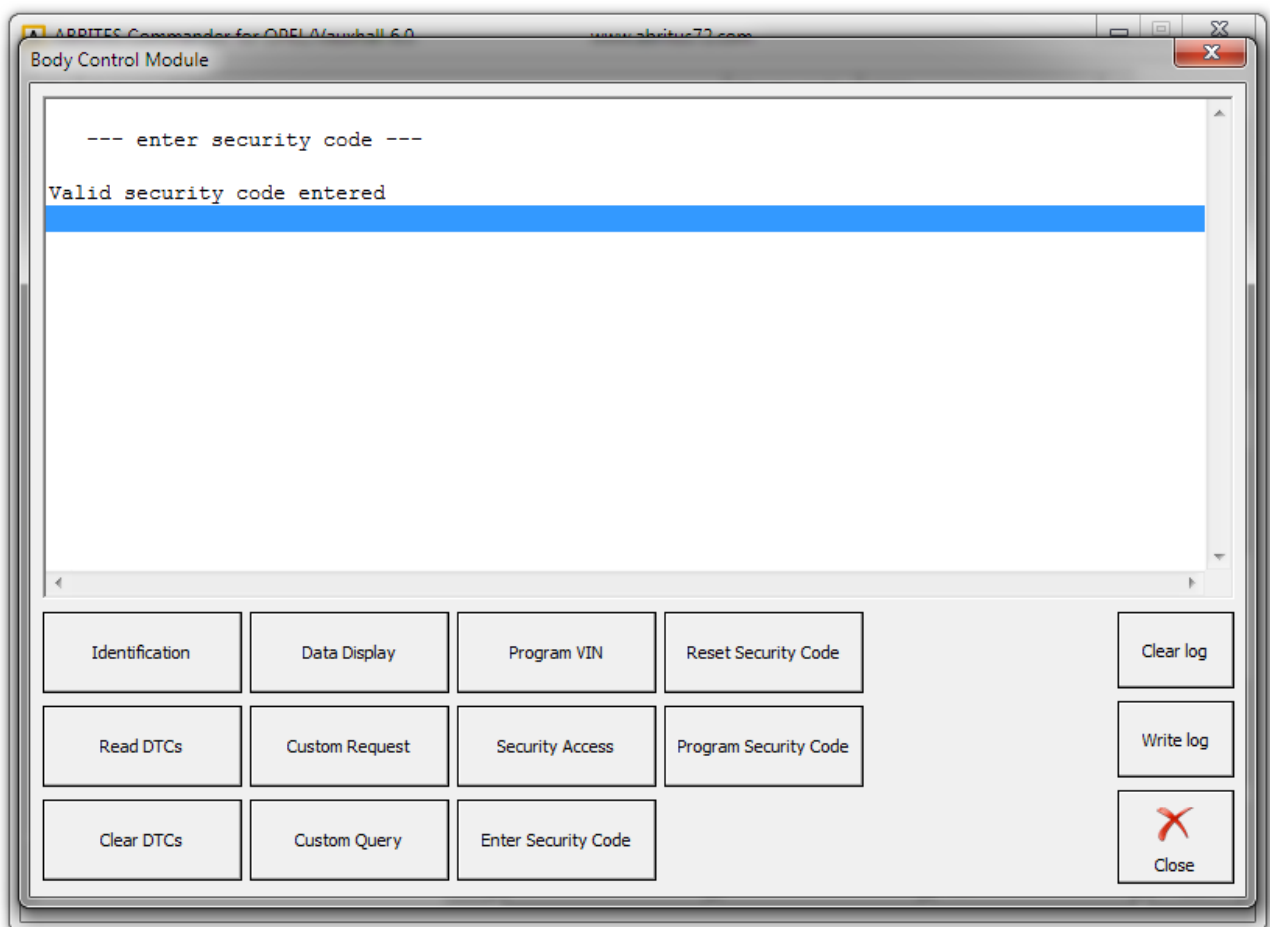
Available immobilizer functions may differ depending on the immobilizer type. Once you enter a valid security code they will become active.

- **Reset immobilizer / Reset Security Code**

This function will set back the immobilizer ECU to its factory default state. Prior to replace, you have to reset the immobilizer back to its factory default state. In this way, you can install it into another car. This will also erase all transponder keys. Please note, that after using this function, you won't be able to start the engine.

- **Reset engine**

This function will set back the Engine Control Module to its factory default state. Prior to replace, you have to reset it back to its factory default state. In this way, you can install it into another car. You can verify the state of the engine ECU immobilizer in the measuring blocks information. **NOTE**: If this function is not available in the immobilizer diagnostic, the function should be available in the engine diagnostic.

- **Program immobilizer functions / Program Security Code**

When you replace an immobilizer or an engine control module you should use this function to program a security code in the replaced components. **NOTE**: It will use the security code that you has been already enter to enable the immobilizer functions.

- **Program immobilizer output**

When you install an immobilizer in a car that is equipped with an Anti Theft Warning System (Alarm), you should program also and the immobilizer output.

Special Functions

ABRITES Commander for OPEL/Vauxhall provide some unique diagnostic functions, which are specific only to our product or they are not supported by the other similar diagnostic tools. These functions are separated in the Special Functions list.
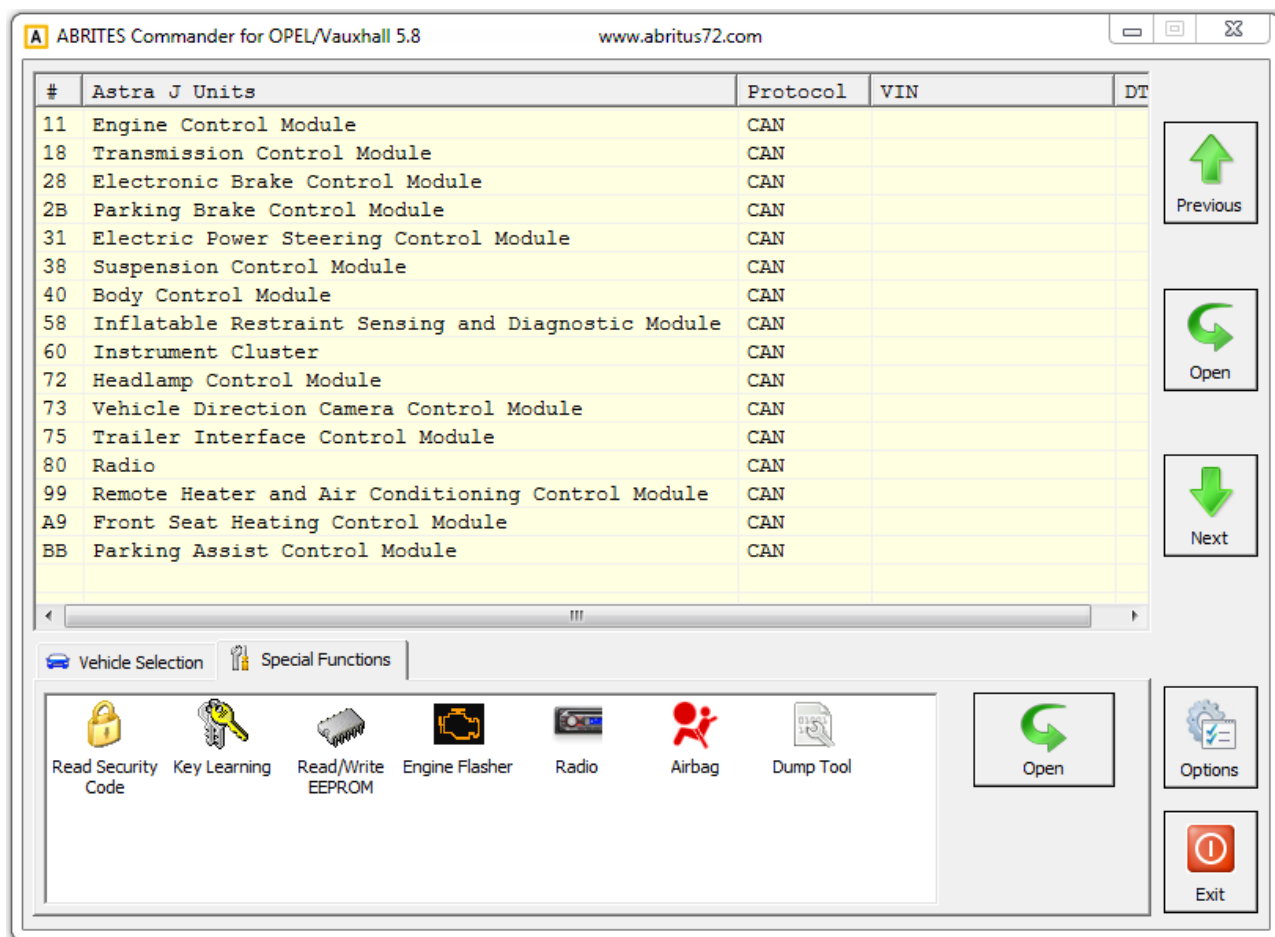
Read Security Code

Security code is required for any immobilizer-related operation. In general it can be found in the Car Pass or can be obtained from your local Opel dealer. Read Security Code function is an instrument for extracting the security code from the car and thereby eliminate the need from contacting the dealer.   To read the security code you have to select make, model and the electronic control unit from which the security code should be extracted. The list of the units depend on the vehicle model and is updated whit every new software version.

Currently supported electronic control units:

Electronic Brake Control Module (EBCM)	ASTRA J, CHEVROLET CRUZE
Engine C14NE	CORSA C

Delphi Delco - 1.4l (GM Brasil)	
Engine X14XE Delphi Delco HSFI-C - 1.4l 16V MULTEC (H)	ASTRA G
Engine X16XEL Delphi Delco HSFI-C - 1.6l 16V MULTEC (H)	ASTRA G, VECTRA B, ZAFIRA
Engine X18XE1 Siemens VDO Simtec 70 - 1.8l 16V	ASTRA G, VECTRA B, ZAFIRA
Engine X20XEV Siemens VDO Simtec 70 - 2.0l 16V	ASTRA G, VECTRA B
Engine Y13DT Magneti Marelli Multijet 6JO - 1.3l 16V CDTI	AGILA, CORSA C, TIGRA B
Engine Y17DIT Delphi Delco HDRC - 1.7l 16V DTI	ASTRA G
Engine Y17DT Delphi Delco HDRC - 1.7l 16V DTI	ASTRA G, CORSA C, MERIVA
Engine Y17DTL Delphi Delco HDRC - 1.7l 16V DTI	ASTRA G, CORSA C, MERIVA
Engine Y20DTH Bosch PSG16 - 2.0l 16V DTI	ASTRA G, ZAFIRA, VECTRA C
Engine Y22DTR Bosch PSG16 - 2.2l 16V DTI	ASTRA G, ZAFIRA, VECTRA C
Engine Z10XE Bosch Motronic ME 1.5.5 - 1.0l 12V	AGILA, CORSA C
Engine Z10XEP Bosch Motronic 7.6.1 - 1.0l 16V	AGILA, CORSA C
Engine Z10XEP Bosch Motronic 7.6.x - 1.0l 16V	CORSA D
Engine Z12XE Bosch Motronic ME 1.5.5 - 1.2l 16V	AGILA, ASTRA G, CORSA C
Engine Z12XEP Bosch Motronic 7.6.1 - 1.2l 16V	AGILA, CORSA C
Engine Z12XEP Bosch Motronic 7.6.x - 1.2l 16V	ASTRA H, CORSA D
Engine Z13DTH Magneti Marelli Multijet 6O2 - 1.3l 16V CDTI	ASTRA H, CORSA D
Engine Z13DT	AGILA, CORSA C, TIGRA B

Magneti Marelli Multijet 6JO - 1.3l 16V CDTI	
Engine Z14XE Delphi Delco HSFI-2.1 - 1.4l 16V MULTEC (H)	ASTRA G, CORSA C, TIGRA B
Engine Z14XEL Bosch Motronic 7.6.x - 1.4l 16V	ASTRA H
Engine Z14XEP Bosch Motronic 7.6.1 - 1.4l 16V	ASTRA G, CORSA C, MERIVA, TIGRA B
Engine Z14XEP Bosch Motronic 7.6.x - 1.4l 16V	ASTRA H, CORSA D
Engine Z16LER Bosch Motronic 7.6.x - 1.6l 16V	CORSA D
Engine Z16LET Bosch Motronic 7.6.x - 1.6l 16V	ASTRA H
Engine Z16XE, Z16SE Delphi Delco HSFI-2.1 - 1.6l 16V MULTEC (H)	ASTRA G, CORSA C, MERIVA, ZAFIRA, VECTRA B
Engine Z16XE1 Delphi Delco MT35E	ASTRA H, ZAFIRA B
Engine Z16XE Delphi Delco HSFI-2.2 - 1.6l 16V MULTEC (H)	VECTRA C
Engine Z16XEP Delphi Delco HSFI 2.4 - 1.6l	ASTRA G, MERIVA
Engine Z16XEP Delphi Delco MT35E	ASTRA H, VECTRA C, ZAFIRA B
Engine Z16XER Siemens VDO SIMTEC 75 - 1.6l 16V	ASTRA H, ZAFIRA B
Engine Z17DTH, Z17DTL Bosch EDC16C9 - 1.7l 16V CDTI	ASTRA H Note: Not all software version of the ECM are supported
Engine Z18XE, Z18XEL Siemens VDO SIMTEC 71.1 - 1.8l 16V	ASTRA G, CORSA C, MERIVA, TIGRA B, VECTRA B, ZAFIRA
Engine Z18XER Siemens VDO SIMTEC 75 - 1.8l 16V	ASTRA H, VECTRA C, ZAFIRA B
Engine Z18XE Siemens VDO SIMTEC 71.5/71.6 - 1.8l 16V	ASTRA H, VECTRA C
Engine Z19DT, Z19DTH, Z19DTL Bosch EDC16C9 - 1.9l 16V CDTI	ASTRA H, VECTRA C, ZAFIRA B Note: Not all software version of the ECM are supported

Engine Z20LEH Bosch Motronic 7.6.x - 1.6l 16V	ASTRA H, ZAFIRA B
Engine Z20LEL Bosch Motronic 7.6.x - 1.6l 16V	ASTRA H
Engine Z20LER Bosch Motronic 7.6.x - 1.6l 16V	ASTRA H, ZAFIRA B
Engine Z20LET Bosch Motronic ME 1.5.5 - 1.2l 16V	ASTRA G, ZAFIRA
Engine Z22SE Delco - 2.2l 16V	ASTRA G, VECTRA B, ZAFIRA
Engine Z22XE Siemens VDO SIMTEC 71 - 2.2l 16V	OMEGA B
Immobiliser	ASTRA F, CALIBRA, CORSA B, TIGRA, VECTRA B Note: Works only, if pin code already has been entered correctly and the battery was not disconnected since then.
Info Display	ASTRA H, CORSA D, VECTRA C, ZAFIRA B
Instrument Panel Cluster	CORSA D, CORSA C, MERIVA, TIGRA B

Key Learning

Key Learning is an instrument for programming transponder keys to immobilizer.

ECU Flasher

Currently supported electronic control units:

X18XE1 - Siemens Simtec 70 read/write	ASTRA G, VECTRA B, ZAFIRA A
X20XEV - Siemens Simtec 70 read/write	ASTRA G, VECTRA B, ZAFIRA A
Y17DIT - Delphi Delco HDRC EURO2 read/write	ASTRA G
Y17DT - Delphi Delco HDRC read/write	ASTRA G, CORSA C, MERIVA
Z10XE - Bosch Motronic ME 1.5.5 read/write	AGILA, CORSA C
Z10XEP - Bosch Motronic 7.6.1 read/write	AGILA, CORSA C
Z10XEP - Bosch Motronic 7.6.x	CORSA D

read/write	
Z12XE - Bosch Motronic ME 1.5.5 read/write	AGILA, ASTRA G, CORSA C
Z12XEP - Bosch Motronic 7.6.1 read/write	AGILA, CORSA C
Z12XEP - Bosch Motronic 7.6.x read/write	ASTRA H, CORSA D
Z13DTH - Magneti Marelli MJD 6O2 read/write	ASTRA H, CORSA D
Z14XEP - Bosch Motronic 7.6.x read/write	ASTRA H, CORSA D
Z16LEL - Bosch Motronic 7.6.x read/write	CORSA D
Z16LER - Bosch Motronic 7.6.x read/write	CORSA D
Z16LET - Bosch Motronic 7.6.x read/write	ASTRA H
Z16XE1 - Delphi Delco MT35E read/write	ASTRA H, ZAFIRA B
Z16XEP - Delphi Delco HSFI 2.4 read only	ASTRA G, MERIVA
Z16XEP - Delphi Delco MT35E read/write	ASTRA H, VECTRA C, ZAFIRA B
Z16XER - Siemens Simtec 75 read/write	ASTRA H, ZAFIRA B
Z18XE - Siemens Simtec 71.1 read/write	ASTRA G, CORSA C, MERIVA, TIGRA B, VECTRA B, ZAFIRA
Z18XE - Siemens Simtec 71.5 read/write	ASTRA H, VECTRA C
Z18XE - Siemens Simtec 71.6 read/write	ASTRA H, VECTRA C
Z18XER - Siemens Simtec 75 read/write	ASTRA H, VECTRA C, ZAFIRA B
Z20LEH - Bosch Motronic 7.6.x read/write	ASTRA H, ZAFIRA B
Z20LEL - Bosch Motronic 7.6.x read/write	ASTRA H
Z20LER - Bosch Motronic 7.6.x read/write	ASTRA H, ZAFIRA B

Z20LET - Bosch Motronic ME 1.5.5 read/write	ASTRA G, ZAFIRA A
Z22XE - Siemens Simtec 71 read/write	OMEGA B

Dump Tool

Dump Tool is an instrument for editing the content of the EEPROM files of specific electronic control units. You have to select a unit and load a dump file. Then when you click on the "Parameters..." button you will see a pop-up window with all available parameters related to the chosen unit. Typical parameters are odometer, security code and VIN. For the airbag units the option clear crash data is available. You can modify them by clicking on the parameter value. When complete with modifications click on the OK button. The dump data will be updated accordingly. All necessary check sums will be regenerated.

Note that the dump files are loaded in a hexadecimal editor, which can be used by advanced users as a tool for manual editing of the EEPROM content.

Abbreviations

ACC	Adaptive Cruise Control
AFL	Adaptive Forward Lighting
AHL	Automatic Headlamp Leveling
BCM	Body Control Module
CAN	Controller Area Network
CIM	Column Integrated Module
DTC	Diagnostic Trouble Code
ECM	Engine Control Module
ECU	Electronic Control Unit
EHPS	Electro Hydraulic Power Steering
EPS	Electro Power Steering
ESP	Electronic Stability Program
FZM	Front Zone Module
GMLAN	General Motors in vehicle Local Area Network
HVAC	Heating Ventilation and Cooling
IPC	Instrument Panel Cluster
PEPS	Passive Entry & Passive Start
REC	Rear Electrical Center
RZM	Rear Zone Module
SADS	Semi Active Damping System
SAS	Steering Angle Sensor
SLM	Shift Lever Module
TC	Traction Control
TCM	Transmission Control Module
TIM	Trailer Interface Module
TPMS	Tire Pressure Monitoring System
UEC	Underhood Electrical Centre